Attorney Docket No.:

MGU-0025

Inventors:

Damha et al. 10/748,475

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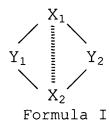
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A composition for inhibiting the RNase H activity of a retroid virus reverse transcriptase comprising an inhibitory agent of Formula I:



wherein,

 X_1 and X_2 are antiparallel complementary oligonucleotide strands that associate to form a duplex;

 X_1 is 2 to 24 nucleotides in length;

 X_2 is 2 to 24 nucleotides in length;

 Y_1 is 0 to 8 nucleotides in length;

 Y_2 is 0 to 8 nucleotides in length;

at least one of Y_1 or Y_2 is 2 to 8 nucleotides in length; and

 Y_1 and Y_2 each independently contain a ribonucleic acid; Z', 5'-linked ribonucleic acid; or combination thereof wherein said ribonucleic acid comprises the sequence 5'-UUYG-3'/2' (SEQ ID NO:1).

Claim 2 (original): A composition of claim 1, wherein X_1 and X_2 of Formula I are comprised of 3',5'-linked ribonucleic acid;

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deoxyribonucleic acid; 2',5'-linked ribonucleic acid; arabinonucleic acid; 2'-fluoro-arabinonucleic acid; locked nucleic acid; peptide nucleic acids; or a combination thereof

Claim 3 (original): A composition of claim 1, wherein X_1 and X_2 of Formula I are comprised of 3',5'-linked ribonucleic acid.

Claim 4 (original): A composition of claim 1, wherein X_1 and X_2 of Formula I are comprised of deoxyribonucleic acid.

Claim 5 (original): A composition of claim 1, wherein X_1 and X_2 of Formula I are comprised of a combination of 3',5'-linked ribonucleic acid and deoxyribonucleic acid.

Claim 6 (original): A composition of claim 1, wherein X_1 and X_2 of Formula I are 3',5'-linked ribonucleic acid and are 4 to 10 nucleotides in length.

Claim 7 (original): A composition of claim 1, wherein Y_1 and Y_2 are a 3',5'-linked tetraribonucleotide of the sequence 5'-UUYG-3' (SEQ ID NO:1).

Claim 8 (original): A composition of claim 1, wherein said composition is a cyclic structure.

Claim 9 (original): A method for inhibiting the replication of a retroid virus comprising contacting a cell infected with a retroid virus with a composition of claim 1 which inhibits the

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RNase H activity of a retroid virus reverse transcriptase thereby inhibiting the replication of the retroid virus in said cell.

Claim 10 (original): A method for preventing or treating a retroid virus infection comprising administering to a subject having or at risk of having a retroid virus infection an effective amount of a composition of claim 1 which inhibits the RNase H activity of the retroid virus reverse transcriptase so that the replication of the retroid virus is inhibited and the retroid virus infection in said subject is prevented or treated.